UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,236	10/19/2001	Eric Gaussier	07447.0061 (XeroxRef.No.	7611

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EXAMINER
NGUYEN, CAM LINH T

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	09/982,236	GAUSSIER ET AL.
	Examiner	**Art Unit**	
	CamLinh Nguyen	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _04 April 2005_.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-26_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-26_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This Office Action is response to the RCE filed on 4/4/2005.

2.   Applicant's amendments to claims 1 – 26 are acknowledged. Consequently, claims 1 – 26

are currently pending.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1, 8, 10, 12 – 16, 20 – 23, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Francis et al (U.S. 5,761,418) in view of Aoki et al (U.S. 6,078,913) of record.

♦ As per claim 1, 8, 10, 12 – 16, 20 – 23,

Francis et al (U.S. 5,761,418) discloses a method for clustering a plurality of documents (See

Fig. 1, documents a –k, col. 9, lines 1 – 6) comprised of a plurality of clusters (see Fig. 1,

clusters A – C), wherein each document includes a plurality of words (col. 7, lines 15 – 16), the

method comprising:

-     " Accessing the document collection" See Fig. 2, fig. 15, element 1540, col. 8, lines 13 –

      25.

-     " Performing a clustering process that creates a hierarchy of clusters that reflects a

      segregation of the documents in the collection based on the words included in the

      documents" See Fig. 1, col. 7, lines 4 – 31. The resources are linked to each other by a

path or links. In other words, the first resource links to second, and the second resource

can link to third resource by its terms as shown in Fig. 5. The Fig. 5 shows searching

branching out within the clusters (col. 13, lines 45 – 51). Clearly, this is a hierarchical

structure of the clusters.

-   " Wherein any document in the collection may be assigned to a first cluster in the

    hierarchy based on a first segment of the respective document, and the respective

    document may be assigned to a second cluster in the hierarchy based on a second

    segment of the respective document" See Fig. 1, col. 6, lines 59 – 62, col. 7, lines 10 –

    12.

-   " Wherein the first and second clusters are associated with different paths of the

    hierarchy" See Fig. 5.

-   " Storing a representation of the hierarchy of clusters in a memory" See Fig. 15, col. 8,

    lines 13 – 25.

-   " Making the representation available to an entity in response to a request associated with

    the document collection" See Fig. 4, 6, col. 5, lines 42 – 53.

Francis does not clearly teach that the clusters are associated with different paths of the

hierarchy or the plurality of clusters hierarchical organized, wherein each document includes a

plurality of words and is represented as a set of (document, word) pairs.

However, Aoki, on the other hand, discloses a document retrieval apparatus comprising a

cluster database storing a cluster of node information elements linked for clustering the

documents to a hierarchical tree structure based on degree of similarity in all of the documents

(see the Abstract of Aoki). Aoki also teaches that the each node in the tree comprises node

information and document index information (See Fig. 2 of aoki). The keywords in the

documents are represented in the frequency table as are associated with the document in the

database. Therefore, the document is represented as a set of (document, word) pairs.

It would have been obvious to one with ordinary skill in the art at the time the invention was

made to apply the teaching of Aoki into the system of Francis because the combination would

provide the user the most accuracy result search in a short time by linking the most similar

document closely while keeping a form of the cluster when an individual document of the cluster

is updated (col. 4, lines 42 – 45, col. 9, lines 45 - 50 of Aoki).

5.   Claims 2 – 7, 9, 11, 17 - 19 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Francis et al (U.S. 5,761,418) in view of Aoki et al (U.S. 6,078,913) as applied to claims

above, further in view of Agrawal et al (U.S. 6,233,575).

♦ As per claims 2, 9, 11, 17 - 18,

Francis/Aoki discloses a method for clustering a plurality of documents based on keywords.

Francis/Aoki does not clearly disclose that setting a probability parameter to an initial value, and

assign documents to a cluster based on the value.

However, Agrawal, on the other hand, discloses a multilevel taxonomy based on features derived

from documents classification using fisher values as discrimination value (see the title). Agrawal

teaches that the clusters can be regarded as classes (col. 7, lines 64). As shown in Fig. 2 of

Agrawal, there are plurality of classes represented by nodes (col. 10, lines 59 – 65). Documents

are classified to nodes by calculating the statistics of the terms in the documents (col. 10, lines 66

– col. 11, lines 2). Classification of a document starts at the taxonomy root by assigning a score

to each child of the root. (Col. 14, lines 50 – 53). Therefore,

- "A first class" corresponds to the root.

- Each node or sub node corresponds to a parameter with a certain value.

It would have been obvious to one with ordinary skill in the art at the time the invention was

made to apply the teaching of Agrawal into the system of Francis/Aoki because the combination

would provide a scalable, efficient, reliable, and semi automatic organization and reorganization

of a database (col. 4, lines 30 – 34, Agrawal).

- As per claims 3, 19, Francis/Aoki/Agrawal disclose:

    - " Determining whether the first class has split into two child classes" See Fig. 2, element

      22 (first class), element 24 – 28 (child classes) (col. 9, lines 50 – 67, Agrawal).

- As per claim 4, Francis/Aoki/Agrawal disclose:

    - " Repeating the step of determining for each document in the collection" See Fig. 4, col.

      18, lines 17 – 20, Agrawal.

- As per claims 5 – 7, Francis/Aoki/Agrawal disclose:

    - " Performing the clustering process" col. 14, lines 33 – col. 18, lines 27, Agrawal.

- As per claims 24 - 25, Francis/Aoki/Agrawal disclose:

    - "Wherein the representation defines the probability of a document as the product of the

      probability of the (document, word) pairs it contains" (See Fig. 2 and associated texts of

      Aoki).

- As per claim 26, Francis/Aoki/Agrawal disclose:

    - The form of probability model (See claim 8 of Aoki).

Response to Arguments

6.   Applicant's arguments with respect to claims 1 - 26 have been considered but are moot in view of the new ground(s) of rejection.
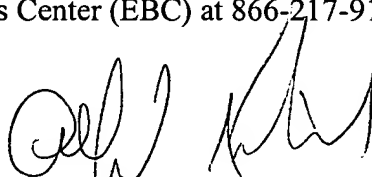
Conclusion

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to CamLinh Nguyen whose telephone number is (571) 272-4024. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN

ALFORD KINDRED
PRIMARY EXAMINER